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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,395	10/18/2001	Arild E. Skjolsvold	209333	7192

23460 7590 01/13/2005

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EXAMINER	
BONSHOCK, DENNIS G	

ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/982,395	SKJOLSVOLD, ARILD E.	
	Examiner	Art Unit	
	Dennis G. Bonshock	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Final Rejection

Response to Amendment

1. It is hereby acknowledged that the following papers have been received and placed on record in the file: Amendment as received on 07-16-2004.

Claims 1-33 have been examined.

Status of Claims:

Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al., Patent #5,781,720, hereinafter Parker, Tan et al., Patent #6,356,902, hereinafter Tan, and Singh el al., Patent #6,415,396, hereinafter Singh.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al., Patent #5,781,720, hereinafter Parker, Tan et al., Patent #6,356,902, hereinafter Tan, and Singh el al., Patent #6,415,396, hereinafter Singh.

3. With regard to claim 1, Parker teaches a system that does automated testing of a GUI environment, through the generation of a mapping between GUI objects and their functions (see column 16, line 59 through column 17, line 12, column 25, lines 4-8 and column 9, lines 50-67), the executing of an executable feature of the Logical Screen Element (LSE) (see column 4, lines 39-45), a LSE Manager that identifies locations of

the LSEs (see column 10, line 1-9), and it would be obvious that in order to execute the system as if selection were by user input the executable features have to be stored in association with graphic elements (see column 4, lines 39-45 and column 9, lines 11-21). Parker further teaches, in column 9, lines 50-67, the LSEM storing functions that correspond to (are mapped to) objects on the screen, and in column 12, lines 50-56, the test driver having access to the LSEM for driving the application. Tan, teaches a system in which elements are mapped into a graph map, similar to that of Parker, but Tan explicitly points out the storing of the elements (see column 2, lines 10-16). Singh teaches a system of providing regression tests (see column 3, lines 35-60), similar to that of Parker, but further explicitly points out selection techniques used on a GUI to provide a graphical test structure (see column 3, lines 25-59). It would have been obvious to one of ordinary skill in the art, having the teachings of Parker, Tan, and Singh before him at the time the invention was made to modify the system of Parker to include the explicit teaching of storing the executable features of the elements as did Tan, and to include the selection techniques of Singh. One would have been motivated to make such a combination because Parker and Singh both implement regression testing, they only chose to do selection in different manners, and the method of mapping a tree structure to a graph map of Tan is similar to the mapping systems of Parker and Sigh but further provides a mapping system in which all possible elements are included (see column 2, lines 40-59).

4. With regard to claims 2, 23, and 32, which teach a system in which selection of an executable feature exposes a second graphic feature that is then treated the same

as the first, Parker teaches, in column 4, lines 50-55 and column 9, lines 9-22, that when one element exposes another element the second element is processed likewise. Singh further teaches this limitation, in column 4, lines 58-60, which teach that if a given requirement is executed, and a new event is received, the second requirement is executed.

5. With regard to claims 3 and 24, which teach the retrieving comprising capturing information pertaining to the graphic element, Parker teaches, in column 30, lines 15-19, a comparison based on captured information.

6. With regard to claims 4, 21, and 25, which teach that storing includes updating an indicator associated with the graphics element when an executable feature stored in association with the graphics element is executed, Parker further teaches, in column 27, lines 60-65, graphical items having a Boolean value to show if the item is currently executable. It would be obvious having the teachings of Parker, Tan, and Singh that the Boolean value of Parker could be controlled to only execute each item once similar to the systematic selection techniques (depth-first/breadth-first) of Tan and Singh.

7. With regard to claim 5, which teaches storing including organizing the retrieved information so that an executable feature stored in association with graphics element can be interpreted by a computer-executable application capable of accessing the retrieved information, Tan further teaches, in column 1, lines 5-17 and column 2, lines 40-59, a storage and retrieval method that allows for organized retrieval of executable codes associated with graphical objects.

8. With regard to claim 6, which teaches storing including organizing the retrieved information such that an executable feature stored in association with the graphics element can be interpreted by a user capable of accessing the retrieved information from memory, Tan further teaches, in column 1, lines 5-17 and column 3, lines 40-45, a storage and retrieval method that allows for organized retrieval of executable codes associated with graphical objects.

9. With regard to claims 7 and 16, which teach executing comprising selecting form the stored information an executable feature stored in association with the graphics element, Tan further teaches, in column 1, lines 5-17 and column 3, lines 40-45, a storage and retrieval method that allows for organized retrieval of executable codes associated with graphical objects.

10. With regard to claims 8 and 17, which teach selecting comprising selecting an executable feature not previously executed, Parker further teaches, in column 27, lines 60-65, graphical items having a Boolean value to show if the item is currently executable. It would be obvious having the teachings of Parker, Tan, and Singh that selection could be made with respect to the Boolean value of Parker that could be controlled to only execute each item only once, similar to the systematic selection techniques (depth-first/breadth-first) of Tan and Singh.

11. With regard to claims 9, 18, and 26, which teach the selecting comprising reviewing an indicator to select an executable feature not previously executed, Parker further teaches, in column 27, lines 60-65, graphical items having a Boolean value to show if the item is currently executable. It would be obvious having the teachings of

Parker, Tan, and Singh that selection could be made with respect to the Boolean value of Parker that could be controlled to only execute each item only once similar to the selection techniques (depth-first/breadth-first) of Tan and Singh.

12. With regard to claims 10, 19, and 27, which teach selecting comprising selecting executable features in a depth-first mode of operation, Tan further teaches, in column 2, lines 40-59, selection being through either through a depth-first or breadth first mode. Singh further teaches, in column 13, lines 50-63, reaching nodes, corresponding to GUI elements, in this manner.

13. With regard to claims 11, 20, and 28, which teach selecting comprising selecting executable features in a breadth-first mode of operation, Tan further teaches, in column 2, lines 40-59, selection being through either through a depth-first or breadth first mode. Singh further teaches, in column 13, lines 50-63, reaching nodes, corresponding to GUI elements, in this manner.

14. With regard to claims 12, 29, and 33, which teaches a computer readable medium having computer executable instructions for performing the method, Parker teaches, in column1, lines 14-43, a computer readable medium for implementing the system.

15. With regard to claim 13, Parker teaches a system that does automated testing of a GUI environment, through the generation of a mapping between GUI objects and their functions (see column 16, line 59 through column 17, line 12, line 12, column 9, lines 50-67, and column 25, lines 4-8), see column 30, lines 15-19, a comparison based on captured information (see column 30, lines 15-19), the executing of an executable

feature of the Logical Screen Element (LSE) (see column 4, lines 39-45), a LSE Manager that identifies locations of the LSEs (see column 10, line 1-9), and it would be obvious that in order to execute the system as if selection were by user input the executable features have to be stored in association with graphic elements (see column 4, lines 39-45 and column 9, lines 11-21). Parker further teaches, in column 9, lines 50-67, the LSEM storing functions that correspond to (are mapped to) objects on the screen, and in column 12, lines 50-56, the test driver having access to the LSEM for driving the application. Tan, teaches a system in which elements are mapped into a graph map, similar to that of Parker, but Tan explicitly points out the storing of the elements (see column 2, lines 10-16). Singh teaches a system of providing regression tests (see column 3, lines 35-60), similar to that of Parker, but further explicitly points out selection techniques used on a GUI to provide a graphical test structure (see column 3, lines 25-59). It would have been obvious to one of ordinary skill in the art, having the teachings of Parker, Tan, and Singh before him at the time the invention was made to modify the system of Parker to include the explicit teaching of storing the executable features of the elements as did Tan, and to include the selection techniques of Singh. One would have been motivated to make such a combination because Parker and Singh both implement regression testing, they only chose to do selection in different manners, and the method of mapping a tree structure to a graph map of Tan is similar to the mapping systems of Parker and Sigh but further provides a mapping system in which all possible elements are included (see column 2, lines 40-59).

16. With regard to claim 14, which teaches the capture agent being invoked by the application driver, Parker further teaches, in column 4, lines 15-20 and in column 30, lines 15-19, a comparison based on captured information executed by a test driver on the application program.

17. With regard to claim 15, which teaches the capture agent submitting retrieved information to the application driver, Parker further teaches, in column 4, lines 15-20 and in column 30, lines 15-19, a comparison based on captured information executed by a test driver on the application program.

18. With regard to claim 22, Parker teaches a system that does automated testing of a GUI environment, through the generation of a mapping between GUI objects and their functions (see column 16, line 59 through column 17, line 12, line 12, column 9, lines 50-67, and column 25, lines 4-8), the executing of an executable feature of the Logical Screen Element (LSE) (see column 4, lines 39-45), a LSE Manager that identifies locations of the LSEs (see column 10, line 1-9), and it would be obvious that in order to execute the system as if selection were by user input the executable features have to be stored in association with graphic elements (see column 4, lines 39-45 and column 9, lines 11-21). Parker further teaches, in column 9, lines 50-67, the LSEM storing functions that correspond to (are mapped to) objects on the screen, and in column 12, lines 50-56, the test driver having access to the LSEM for driving the application. Tan, teaches a system in which elements are mapped into a graph map, similar to that of Parker, but Tan explicitly points out the storing of the elements (see column 2, lines 10-16). Singh teaches a system of providing regression tests (see column 3, lines 35-60),

similar to that of Parker, but further explicitly points out selection techniques used on a GUI to provide a graphical test structure (see column 3, lines 25-59). Parker further teaches graphical items having a Boolean value to show if the item is currently executable (see column 27, lines 60-65) where it would be obvious having the teachings of Parker, Tan, and Singh that selection could be made with respect to the Boolean value of Parker that could be controlled to only execute each item only once, similar to the systematic selection techniques (depth-first/breadth-first) of Tan and Singh. It would have been obvious to one of ordinary skill in the art, having the teachings of Parker, Tan, and Singh before him at the time the invention was made to modify the system of Parker to include the explicit teaching of storing the executable features of the elements as did Tan, and to include the selection techniques of Singh. One would have been motivated to make such a combination because Parker and Singh both implement regression testing, they only chose to do selection in different manners, and the method of mapping a tree structure to a graph map of Tan is similar to the mapping systems of Parker and Sigh but further provides a mapping system in which all possible elements are included (see column 2, lines 40-59).

19. With regard to claim 30, which teaches the graphical user interface being generated by a software application included in the set: an application program, an operating system, and a program module, Parker further teaches an application program (see column 1, lines 14-30), an operating system (see column 3, line 40), and a program module (see column 1, lines 14-35), for generating a GUI.

20. With regard to claim 31, Parker teaches a system that does automated testing of a GUI environment, through the generation of a mapping between GUI objects and their functions (see column 16, line 59 through column 17, line 12, column 9, lines 50-67, and column 25, lines 4-8), the executing of an executable feature of the Logical Screen Element (LSE) (see column 4, lines 39-45), a LSE Manager that identifies locations of the LSEs (see column 10, line 1-9), and it would be obvious that in order to execute the system as if selection were by user input the executable features have to be stored in association with graphic elements (see column 4, lines 39-45 and column 9, lines 11-21). Parker further teaches, in column 9, lines 50-67, the LSEM storing functions that correspond to (are mapped to) objects on the screen, and in column 12, lines 50-56, the test driver having access to the LSEM for driving the application. Tan, teaches a system in which elements are mapped into a graph map, similar to that of Parker, but Tan explicitly points out the storing of the elements (see column 2, lines 10-16). Singh teaches a system of providing regression tests (see column 3, lines 35-60), similar to that of Parker, but further explicitly points out selection techniques used on a GUI to provide a graphical test structure (see column 3, lines 25-59). It would have been obvious to one of ordinary skill in the art, having the teachings of Parker, Tan, and Singh before him at the time the invention was made to modify the system of Parker to include the explicit teaching of storing the executable features of the elements as did Tan, and to include the selection techniques of Singh. One would have been motivated to make such a combination because Parker and Singh both implement regression testing, they only chose to do selection in different manners, and the method of

mapping a tree structure to a graph map of Tan is similar to the mapping systems of Parker and Sigh but further provides a mapping system in which all possible elements are included (see column 2, lines 40-59).

Response to Arguments

21. The arguments filed on 07-16-2004 have been fully considered but they are not persuasive. Reasons set forth below.

22. The applicants' argue that there is no teaching of any mapping between executable features and graphics elements.

23. In response, the examiner respectfully submits that Parker further teaches, in column 9, lines 50-67, the LSEM storing functions that correspond to objects on the screen.

24. The applicants' argue that Parker doesn't teach the mapping of graphics elements to executable code being made before runtime execution of the software application under test.

25. In response to applicant's argument that the references fail to show the mapping of graphics elements to executable code being made before runtime, it is noted that the features upon which applicant relies (i.e., mapping being made before runtime of the software) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

26. The applicants' argue that Tan relates to multimedia objects, not graphical elements.

27. In response, the examiner respectfully submits that the inventions of Tan is combinable with Parker and Signh because of the common teaching of mappings between objects and associated executable code, whether or not the organization, managing, naming, and administration of the multimedia objects of Tan are graphically displayed to the user (see column 1, lines 5-17 and column 2, line 40-59).

Conclusion

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

29. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis G. Bonshock whose telephone number is (571) 272-4047. The examiner can normally be reached on Monday - Friday, 6:30 a.m. - 4:00 p.m.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12-16-04
dgb

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